

AN ESSAY  
OF THE  
PRESENT AND FUTURE PROSPECTS  
OF  
FARMING  
IN GREAT BRITAIN;

WITH REFERENCE TO THE EXIGENCIES OF FREE TRADE.

BY WILLIAM THOROLD, M. Inst. C. E.

FORMERLY A PRACTICAL FARMER IN NORFOLK.

SECOND EDITION, WITH ADDITIONS.

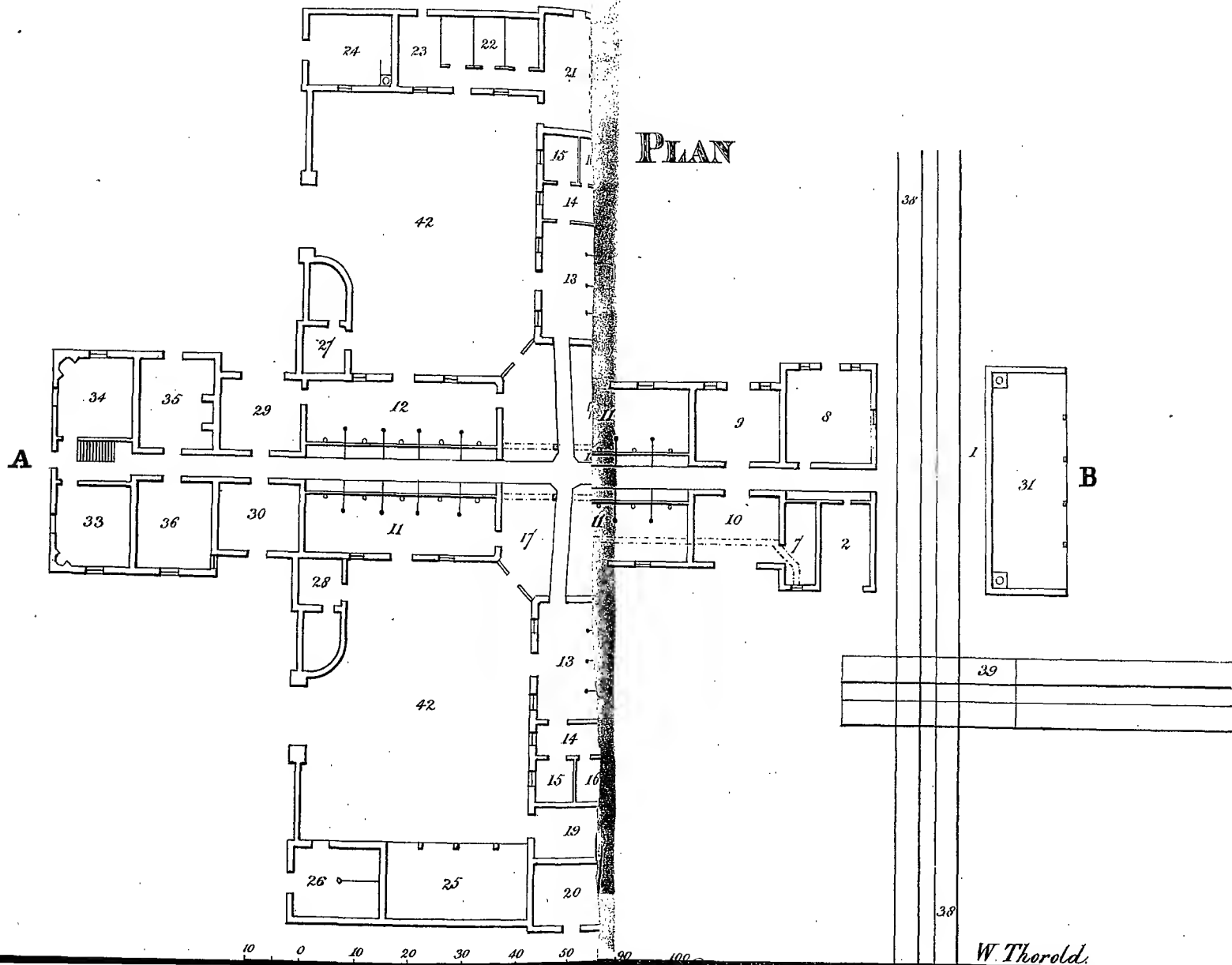
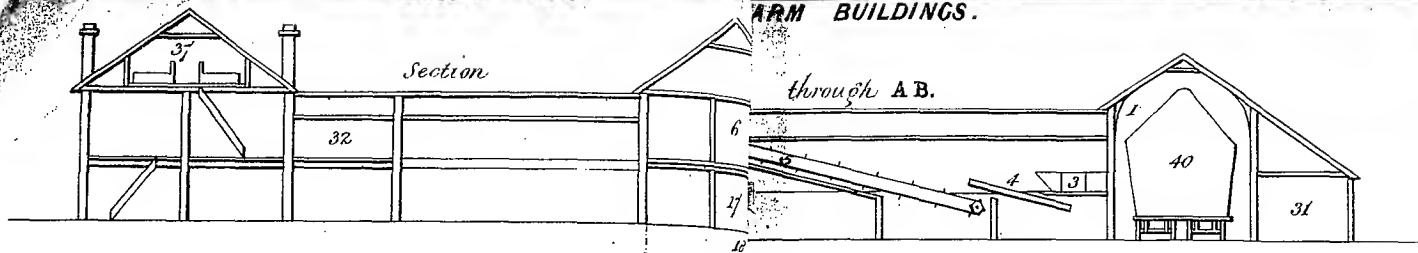
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## AN ESSAY, &c.

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"It is true that much caution and prudence is required in adopting new systems of any kind, which must be liable to failures and miscarriages; but the Farmer has resisted all gradual changes, and by adopting the fallacious criterion of measuring capability by the extent of individual performance, and of weighing mind by the standard of single judgment, and by reckoning every thing impossible that has not been done, and every process to be erroneous that has not been seen or previously followed, he has wrought himself into the idea that the present system cannot be surpassed, and that any alteration must not be allowed."

DONALDSON ON MANURES, &c.

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THE question of Protection being now settled by the Legislature, no opinion is about to be offered as to its policy or impolicy. It is perfectly useless to look back, we must only look forward; Protection is gone, and we have Free Trade in its place, how therefore to deal with this Free Trade is the difficulty to be solved.

Lord Lyndhurst says, "a difficulty is something to be got over." Almost every other interest in Great Britain has met with and surmounted similar difficulties. Why should Farmers despair?

It may be as well at once to state, that it is not intended in this Essay to point out the final remedy, but merely to show some of the stepping stones by which it may be approached, and probably ameliorated, provided all parties (instead of calling upon Hercules to lift the waggon out of the mire) lend a shoulder to the wheel, and then give a long and strong pull all together.

The very limited knowledge displayed at a late meeting of the Farmers' Club in London, with the exception of Mr. Smith, of Deanston, is the immediate cause of the Author's attention to the subject, for Mr. Smith's ideas, though perfectly correct, are too far in advance to afford them a chance of introduction, in a general way, for some time to come.

With this view, the Author ventures to offer his assistance, whether properly or not, must be left to time to determine. His qualifications for the task are founded upon an experience as a practical farmer, commencing (in assisting his father, then declining in health) with 1812, and afterwards until 1827, in his own person, and up to 1831, by means of bailiffs; during which time such were the vicissitudes, that he sold barley at 5s. 6d. and 34s. and wheat 13s. and 62s. per coomb, and of course went through all the changes incident to the transition from war to peace, and also that occasioned by the withdrawal of the paper currency—tolerably exciting these, and never likely to be forgotten by many families. The last twenty-two years he has passed as a practical engineer, never losing sight of, or being entirely unconnected with farming, the major part of his practice being intimately connected with it.

Dismissing egotism, let us now proceed, first premising the word farming is used advisedly, in preference to agriculture, and the term landowner instead of landlord, in order that it may embrace all kinds of possessors of land; and, to prevent mistakes, that the object sought is to make farming profitable as a trade, notwithstanding the free trade in corn and other produce.

It will conduce to perspicuity if we address the three classes of persons who will be first affected by this change: viz.—

1st.—Landowners.

2nd.—Gentlemen Farmers.

3rd.—Tenant Farmers, and those desirous of becoming so.

First, then, as to Landowners. It is only intended to offer advice to such as are determined, in all good feeling, to adjust their minds to the circumstances now before them, regardless of what has been hitherto deemed the pre-eminence of landed property. From all others the Author begs to retire, and leave

the field to more daring speculators, at the same time, having no wish to dispute what are, or are not the rights of landed property, but merely to apply that property to the most beneficial purpose, in doing which many antiquated principles will appear to be violated on the first blush of the means proposed. In all great changes some sacrifices must be made, though they frequently amount to no more than a nine-days' wonder.

The first official indication the landowner will receive as to the change, will be as to the rent being too high. Now it has long been shown that a deduction of ten or twenty per cent. will not cure the evil, and the fact, if allowed to be shown by calculation, would come out that there was nothing remaining for rent. The Author when addressing tenant farmers will attempt to show what is meant, and what always will be meant by rent. To landowners this would be a work of supererogation.

Let us now quote two instances where, *under certain modes of cultivation*, there was no rent for the landowner; yet in both instances, *after the system of cultivation was changed*, a fair rent was always available and always paid.

The first was a farm of 300 acres of heavy clay soil, held in hand by the owner for twenty years, until at length he became tired, although it had always been conducted in the most *economical* manner in every respect. It was then let to the party who had during that twenty years officiated as bailiff, and that without the slightest impeachment of his integrity, and ever since he has been the tenant. By high farming he has not only paid the rent, but made a good profit in addition.

The other instance is that of a farm with a light dry soil, and the result was precisely similar to the first.

Such being facts, no reduction of rent, as a whole, is proposed, though there may afterwards be partial reductions, compensated in other parts by additions.

Matters having arrived at this stage, the tenant or tenants can have no objection to a re-arrangement of his or their farms, always premising that they are to be compensated for un-

exhausted improvements, as far as the soil is known to be benefitted, and of course for other matters covenanted and customary.

It will then be practicable to arrange the several farms in a more contiguous and compact manner, and the buildings as near as possible being in the centre of the occupation, it will probably turn out that several fields cannot be brought into an occupation, being too far from the buildings. These can frequently be let off at a higher rent to tradesmen and others, as accommodation lands; or converted into small farms and let to deserving tenants, who by perseverance in well-doing, will ultimately become competitors for a larger one; or it may even appear more desirable to take the out-laying fields from several adjoining occupations to make an additional farm.

It can hardly be expected that this system can be carried to its fullest extent without an Act of Parliament being obtained to exchange lands by consent of the parties in possession, regardless of the tenure and condition under which lands may be then held. Nothing can be more easy than to take powers in that Act to secure all incumbrances, settlements, &c. upon the exchanged land that existed upon the original. Powers also might be taken to borrow a limited sum of money (as has been already done by the Drainage Act) to carry out the exchange and improvements inherent thereon.

In carrying out these arrangements, the landowner will do right to have farms of different sizes, according to the extent of his estate, in order, as has been before hinted, to keep up a wholesome emulation and materials for competition, when necessary; and it should be a principle universally acted upon, that upon any farm falling into the landowner's hands, the first offer of it should be given to the most deserving and suitable tenant, then in the occupancy of another farm upon the same estate.

It is not intended to offer an opinion as to leases; the experience on the Earl of Leicester's estate, in Norfolk, being in favour of leases, while the practice on the Earl of Yarborough's, in Lincolnshire, comprising 30,000 acres, with equally good

farming, is without leases, and the tenants have been equally long upon the estate as where leases only are known. The terms for remunerating tenants, who from any cause do leave this estate, are described in one of the earlier volumes of the transactions of the Royal Society of Agriculture. There can be no fear of some mode of giving the tenant entire security for permanent improvements, being arrived at in the course of the transition; but it can only be expected, that by unexhausted improvements, it is intended to apply to such as can be recovered from the land by reaping the succeeding crops. No allowance can be made for any additions to the house and buildings, unless there is an outstanding stipulation for such. The difficulty in the way of what are mis-called tenant rights, will be found in defining who is to take and pay for neutral matters, such as both landowner and incoming tenant disclaim as being useless to either.

In addition to an Act of Parliament to facilitate exchanges, it will be only reasonable that all parties connected with farming should unite in obtaining another public Act to assess the cost of maintaining the poor, and all charges for police and the administration of justice, upon the whole property of the country; not only as to the relief in reducing the poor and county rates, but also as to the benefit of the labouring poor themselves, both as to their settlement and freedom to obtain the best market for their labour.

It is now requisite to point out what will be necessary for a landowner to concede and sacrifice, in order to bring about this change, without encroaching upon the tenant's capital or stock, properly applicable to the occupation of the land.

After setting out a fair portion of park and demesne lands, with woods and plantations, the next matter is to avoid having too great a head of game. Hares and rabbits must be henceforth entirely extinct on lands let to tenant farmers, and only a very moderate quantity of winged game allowed to remain, and every year there should be a valuation of the damage done to the crops by the game, and if it exceeds a shilling an acre, it should be allowed to be deducted by the tenant from the rent.



Few landowners can be aware of the damage done to tenants by game, and its consequences; but it having been recently valued at ten shillings per acre, there can be no doubt of the fact in that instance.

Notwithstanding these remarks as to the game question, there is no reason why a tenant should not do all in his power to preserve partridges, so as to afford fair sport early in the season; but it cannot be expected that Free Trade can be met where a head of game is maintained on the land. Pheasants and woodcocks can always be preserved in the woods and demesne lands, in any quantity, for battues or consumption. The sale of game has rendered it less appreciated as the medium of a present. Gamekeepers are also a source of annoyance to farmers, and are frequently beginners of broils and quarrels.

The next sacrifice is with regard to the timber and hedges upon the re-arranged farms. It is an essential part of the new system of farming, that trees, excepting those around the homestead, and in the boundary and fences next public roads, should all be cleared off the land; and in like manner the hedges and ditches also, except those forming the common out-fall drain of the district. The old ditches used as master drains upon wet soils, will, of course, have to remain as pipe drains of larger diameter.

It is not intended to have permanent pasture, except in particular localities, where it is obviously most profitable from the advantage that can be obtained by the frequent application of liquid manure, so as to produce two or more crops of grass in the same season; in all other circumstances, it has long been known that great injury has been sustained by both landowner and tenant, in retaining old hide-bound upland pastures, and most kinds of meadow land—whereas by a constant succession of corn and green crops, more food for cattle can be produced with the addition of a crop of corn every alternate year.

In carrying out all these arrangements, the landowner and tenant must cordially co-operate, the first supplying the capital for all permanent improvements, and the tenant paying interest

upon the amount. Great care and judgment should be exercised in the execution, and they should be constantly under efficient supervision, not from any want of good intentions, but to avoid the possibility of failure. The Author is sorry to say his impression goes to show that tenants with matured judgment are the exception, and not the rule.

It must also be a consideration in the first instance, whether the tenant, from his previous habits of business, not only can, but also will carry out, both the new arrangement of his farm, but likewise apply himself to the best modes of cultivation, and the application of manures to the growth of green and corn crops alternately, according to the best examples, it is presumed, he will see around him; if there is no prospect of a tenant's fulfilling all these desiderata, there is no alternative but for him to leave the estate, for "Why cumbereth he the ground?"—Landowners having quite as much right in taking the means offered for their own defence, as a party would in defending an action at law.

It is also essential in carrying out this system, as before stated, that the farm-buildings, should be as near the centre of the farm as possible, which, if it cannot be obtained by exchange, addition, or reduction, the buildings necessary for occupation should be removed or built new. The old farm house can remain as a residence, or be converted into cottages, as may be most convenient in the preliminary stage of proceeding, and as it will frequently happen that where cottages are wanted, it will be a question whether the old farm houses that are now on the outside of the farm, and consequently badly situated for the farmers' occupation, will not be in the most proper position for cottages? It is also necessary that good hard roads should be made, so as to approach one side of every field in all weathers, and a drift road made from the buildings to the most frequented public road.

It will be impossible in an Essay of this kind, to give general directions as to what buildings will be required, for in some instances, the old buildings may be made available to the new system, by means of internal alterations, and in other cases

many buildings will bear the expense of removal; but by way of filling up a blank, the Author has prepared a design for new farm-buildings, which is appended herewith, and as an explanation of this design will tend in some degree to elucidate part of the new system, he will proceed with the description.

The object of this design is to convert all the straw, hay, and green crops into manure, and to retain or prevent the loss of such manure after it is obtained, in the most effectual and economical manner; it is applicable to any sized farm, by merely increasing or diminishing the feeding and storing departments; but in all cases it should be limited to farms not exceeding a convenient length or breadth from the homestall, on account of the expense of road making and carriage. Steam power is intended to be applied to thrashing, dressing, grinding, and bruising corn, steaming food, cutting hay and straw into chaff, pumping water and liquid manure, slicing turnips, breaking oil cake, sawing wood, raising manure from the house by an inclined plane, to load the carts instantly, and prevent the horses waiting for the same; and probably for the purpose of exhausting foul air from the feeding houses, to excite hunger in cattle, and thereby diminish the time of fattening. It is here necessary to inform our readers, that this last plan has been adopted in factories as a principle of ventilation, and the only objection to it has been, that it makes the work people always hungry, the very thing of all others, beneficial in grazing or fattening cattle. Provision should also be made for rendering the feeding houses perfectly dark for an hour or so after feeding time, in order that the cattle may take their rest. Cramming may thus be introduced into cattle feeding, as has long been practised with poultry, &c.

For this purpose a portable steam engine is preferred (with fixed barn machinery, &c.) on account of its being applicable to more than one set of buildings, which will render it less expensive, and also more adapted to meet the possible contingency of steam ploughing, and being sent to the factory to be repaired, thus avoiding the nuisance of having mechanics on the premises, or it can further be supplied by a travelling or

club engine. Let us now proceed to a reference to the plate 1, which is the Corn Barn open at each end, with a railway running through it, upon which stacks are to be built upon staddle-frames running upon wheels, instead of standing as heretofore upon fixed piers or pedestals, and as many saddles are to be provided as the probable number of stacks. A stack is to be built on these staddle-frames, upon any part of the railway, and can be run into the barn at night, and remain there under cover until it is thatched, which it is obvious can be done either in wet or dry weather. As soon as it is thatched, it is to be run through the barn, a sufficient distance out of the way, and another staddle-frame is to be brought empty from the cross line, and a stack built thereon as before. As soon as it is ascertained that the barn will contain the remainder of the crop, it can be filled in the usual way, and of course this last must be thrashed out first; afterwards the stacks on the saddles can be introduced into the barn, and thrashed by a like process. The length of railway will be limited by the locality and expense, but it must be of sufficient length to admit of two or more kinds of corn being stationed on either side, so that any particular stack can be thrashed when wanted, by running all those before out of the way; as it is intended to have the rails perfectly level, but little power will be required to do this. Hay stacks may also be stationed on close boarded saddles at one end of the line, and can afterwards be brought into the barn when they are required to feed the hay eutter, being thus under cover during the time it would otherwise be partially exposed to the weather.

When the stacks are only required to be moved a short distance, it can be done by a windlass and manual power, or by a capstan driven by the engine, as now practised at the Royal Arsenal in hauling timbers from any part of the yard to the saw mill. As soon as a stack is thrashed, the saddle can be run over the centre of the cross line, and by means of a screw, with a capstan head raised above the line of rails, and being nearly an equal balance, it can be turned by two men, and lowered into the cross line; it is then to be covered with a sufficient quantity

of wheat straw, to keep off the weather and out of the way on the cross line, such straw being applied in thatching the ensuing year's stacks, and ready when wanted.—2. The house to contain the portable steam engine, to be connected through the wall by a universal joint to the driving shaft of the permanent machinery, and also by a swan-neck joint to the pipe feeding the steam cookery.—3. The thrashing drum upon the upper floor.—4. Straw shaker.—5. A Jacob's ladder, whose duty it is to remove the straw from the shaker into the straw barn.—6. Where it remains until it is wanted for litter or other purposes; if required to be cut, it can be brought back again by reversing the motion of the ladder. It is presumed every grain of corn will thus be separated from the straw, and the straw will be in the most convenient place for its future application; being connected with the feeding houses and stables it can be got at with the least labour, and perfectly dry and clean.—7. The steam cookery; it will also be desirable to place the manure and cold water pumps here to keep them from the frost.—8. Hay and straw and straw cutting house. (Note, a wicket is obviously omitted on the plate to the barn.)—9. Corn bruising and cake breaking mill.—10. Turnip slicing house.—11, 11, and 11, are feeding stalls for thirty beasts.—12. Stalls for ten milch or grazing cows.—13, 13. Stables for eight cart horses.—14, 14. Harness rooms.—15 and 16. Chaff bins.—17 and 17. Manure or dung house.—18. Liquid manure tank, under part of ditto.—19. House for a bull.—20. Infirmary for sick cattle.—21. Stalls for six suckling or milch cows.—22. Pens for rearing calves.—23. Turnip house.—24. Fuel, &c. &c.—25. Lodge for yearling stock.—26. Saddle-horse stable.—27. Sow and pigs.—28. Fat pigs.—29. Turnip or root house.—30. Oil cake or meal store.—31 and 31. Cart lodge.—32. Granary for horse corn.—33. Parlour or clerk's office.—34. Kitchen or bailiff's room.—35. Wash-house.—36. Dairy.—37. Dormitory for casual labourers or servants.—38. Railway.—39. Cross or light railway.—40. End view of corn stack in barn under cover.—41. Inclined planes for manure loading, as before alluded to.—42. Court or farm yards.

It is presumed these buildings are concentrated in a sufficient manner to save materials in their original construction—to avoid unnecessary shafting in connecting the machinery, and thereby economise power in the engine, so as to reduce the underground drainage to the shortest possible distance, and all manual operations and inspection to the minimum, with a great provision for manual labour being performed under cover in wet weather. There is no greater room allowed for the several appropriations than has hitherto been considered indispensable under any common plan, and from the character of the buildings they need not be expensive; and to avoid this in one point, it is not intended to dress the corn coincidently with its being thrashed, but the day after, several other trifling advantages being obvious.

As regards the important item of cost, that must be regulated by local circumstances. First, as to the materials, whether of bricks, stones, or clay; whether of purchased or timber grown upon the land, and whether any of the old buildings are applicable, without too much labour or cost. The railway may be constructed with old materials, that will for a considerable time to come be had cheap, including wheel and axletrees.

Enough has been shewn to conclude, that it will not be more costly than the commonest plan with the same cubic contents; on the other hand, it will be infinitely more likely to repay the interest charged upon it. It is obvious, by inspecting the plate, the house is left an open question, although with a very trifling addition, in small matters, it may be made commodious and comfortable.

Let me now address those who chiefly occupy their own estates.

Gentlemen Farmers will, of course, exercise their discretion in taking advantage of their position, being the most ready to embrace any new system on account of the unity of interest; but they will probably be glad to avail themselves of the Act for Exchanging Lands, in getting rid of inconvenient fields, and they also will be equally interested in equalizing the poor and county rates; they will also have the advantage of adopting improvements gradually, as taste or opportunity may suggest as a means

of employment. They will also be exempt from restrictive cultivation, and many other matters that may at first be disagreeable to those who hate a change; nevertheless, they will have a full share of responsibility and risk in encountering free trade, and it will behove them to exercise extreme caution, in order to insure success, which, after all means nothing more than retaining present position, for it possibly may be an inglorious battle.

Should they be disposed to adopt any, or all the Author's ideas, they will be good enough to read this Essay through, and make their own selection.

The next in rotation to whom I would address myself are tenant farmers on a larger scale, who have generally been in advance as far as improvements are concerned. These gentlemen have in every respect kept pace with the times, and have hitherto, either as originators or seconders, produced the major part of the improvements which are so obvious in every field or farming ride. To such an extent has this been carried, that it is in many localities doubted whether it can be raised higher. It may appear an ungracious task in any one who attempts even to call in question or doubt their modes of operation, and it would certainly be so, if it were not obvious to every bystander that this class are frequently thwarted in their best endeavours by objects and matters over which they have no controul, and which entirely dishearten them from further perseverance. When this is the case, there is an end of all contest with Free Trade, for it is not merely the casual obtaining of a good crop or a good lot of cattle that will enable him to do so; for nothing short of all good crops and all good cattle can meet it, and how is this to be obtained by any party who is bound or curbed in some improper manner, or who has such local disadvantages to contend with. These are obvious defects, and though easy to remedy, still they must bear them under the existing state of things, for the occupier has no remedy. These matters need not be particularized, for there are too many cases which can be applied by the suffering parties. Surely it will then be better for this class of farmers to assist in estab-

lishing a uniform system, than in continuing an imperfect one, which however well it may be found to act in former times; cannot be said to be adapted to meet the change of circumstances, and even should protection be restored, which cannot be justly expected, no harm could arise in the adoption of the system proposed by the Author, for it will assuredly be calculated to meet opposition or competition of any kind, which with the general progressing state of society is likely to spring up.

The Author looks to this class of men for much critical acumen as to his so-called system, and if any hints or improvements are suggested, they will be most thankfully attended to, for it cannot be expected that one individual can point out all the remedies that may be applied to meet the desiderata; at the same time the Author hopes they will do him the justice to study before they condemn, and give a fair hearing to both sides before they agree upon a verdict.

It is now necessary to refer the reader to the kind of farming which must ultimately be adopted, in order to enable the British grower to contend with the foreign farmer, and to use the words of a Scotchman recently published, viz.—that “Capital will not make a successful farmer unless it be combined with *skill*, *capacity*, and *experience* in its possessor. *Skill* to execute with economy and advantage the necessary improvements and operations; *capacity* to foresee and direct these operations in the channel most likely to be remunerative; and *experience* to manage with delicacy and precision the difficulties whether in stock or crop, which constantly demand the attention of the practical farmer.”

The first question with the tenant farmer ought to be, whether he is in a situation or condition to offer battle to such a many-headed monster as Free Trade; for if he is not in a fair position as to his worldly and family prospects, it will be unreasonable to expect that his landlord can make him so all at once, and there is little to tempt a falling man to the fight. Nevertheless, it by no means follows that there is to be an end of the enterprise, for there are many instances where the want of capital has been progressively overcome by dint of constant personal exertion, and



forbearance in personal indulgence. Witness the instance of a pauper passed home to the parish of Carlton Rode, in this county, a few years since. He began by hiring five acres of land, and increased the quantity by degrees, so that he now occupies 90 acres. There are numerous other instances of cattle dealers who began by buying a pig, and now hold large quantities of land entirely by their enterprise, and labour producing capital. The same process has been gone through by most of the great cotton lords, in spite of all opposition, competition, change of currency, bounties on Irish linens, duties and drawbacks, with a host of other difficulties, until they are now able to produce as much for a shilling as formerly cost them a guinea, by their improved machinery and manufacture. This must be introduced into farming as much as possible; every operation must be remodelled so as to cost less money, for it is in vain to expect a higher price for corn and beef; the cost of production must be reduced in every way that ingenuity can suggest, and this end can only be successfully arrived at by minute attention to practice in every department—not to save a trifling amount of money, but to produce the greatest quantity at smallest cost.

Let us now discuss the subject of rent, in order that you may not be disappointed when you may think right to make a complaint to your landlord on this head.

Rent is not now what former political economists were wont to describe, as the remainder after the cost of cultivation and maintenance of the farmer's family is repaid, and there are at least two reasons why it should not be so; the first we will name is the want of accurate accounts, rendering it impossible to ascertain with certainty what is the amount of such cost. And here let me digress and offer a word as to the necessity. The Dutch people say no man ever failed who kept accounts, which is as much as to say no man ever lost money who kept accurate accounts; and the reason is plain: whenever accounts are so kept, as to shew the actual profit and loss of every transaction, few men are so self-willed as to persist in following up any account which would only lead to a repetition of that loss. It is, therefore, clear that

farmers must henceforth keep daily, weekly, monthly, and yearly accounts, taking stock every time a balance is struck, the same as a merchant or tradesman, and write off bad debts, or what is irrecoverable, charging the farm only with its due as a trade, instead of making it the scape-goat for every extra expense or loss.

The second reason why rent is not what it used to be, is the demand for farms being greater than the supply, and there is every probability of this cause remaining; as population continues to increase, and the profits of other trades decrease, people will be more satisfied with the profits arising from farming. Collaterally, rent is very much affected by quality of soil and locality, from a mere nominal sum to £25 per acre per annum, the actual rent of some land near Edinburgh, published in the Sanitary Report, in the year 1842, in the hands of every relieving officer, and known to every landowner in the kingdom. This is openly stated, because there are many farmers who hear of this for the first time, are liable to blame the Author as the promulgator of such a fact. The same quality of land in the Bedford Level, also varies according to the state of the drainage; in one instance, 13s. per acre was found to be a high rent, and in the other, 40s. per acre a cheap or casier paid rent than the 13s., the improved drainage, and consequent cultivation, producing the effect, although there was 27s. per acre difference. These are startling figures, but they serve to shew that improved cultivation offers a wide field, when discussing the amount of rent, and the tenant farmers may rest assured the landowners will be slow to make any permanent reduction, while there are so many avenues open to get it paid in full.

By reference to the address to landowners, the Author's plan of arranging farms, so that the buildings are in the centre of the land or nearly so, has been there shewn, and supposing all this accomplished, and the tenant finds himself and all his cattle located in the centre of a square containing 250 acres, the extreme distance from this point to one of its sides, will be only 550 yards. It must be obvious that any operation, such as going to, or from plough, carting manure, corn, or turnips, will be

within the least possible distance, and can be performed at the least possible expense; it will then be fair to calculate how many, or what proportion of horse labour can be saved in the occupation of every 100 acres, compared with the occupation in its original state, taking into account always that there are to be good straight roads to every field, and that every field has one of its sides or ends abutting on this road, and that all the fields are, with few exceptions, parallel to avoid schutes in ploughing, and that there are no trees or hedges in the way. By this means, a further saving will arise, owing to the roads offering an outlet for carting off green crops direct from every individual ridge without puddling the gateway, or the acre contiguous thereto, thus working it into a plastic state, that unfits it for cultivation for some time, if it ever recovers its pristine state. As before stated, no fences are contemplated, except those forming the external boundary, and next public roads or lanes, and a small enclosed homestead, with a drift way to the nearest public road. Any separation for depasturing, must be done by moveable hurdles; but it will soon be found that the proper mode of consuming green crops is by soiling, that is, by bringing them home to be given to cattle and occasionally sheep, in proper feeding sheds and yards, by which means a great addition of manure, both solid and liquid, is secured, that would otherwise pass off by evaporation in the summer season, whereas it being secured, it can be applied so as to gain a second, and in some instances, a third crop off the same land in one season. This is the fact with the land near Edinburgh, and this will be available to a small extent, say three acres every year upon every farm of 250 acres. This is named as a preliminary measure, but it will undoubtedly be done to a much greater extent, as soon as men begin to see by actual experience the advantage to be gained by it. Now then, again, let the farmer imagine himself directing his operations. He will undoubtedly be able to conduct his business with three horses instead of four, as formerly employed, and every other operation will be carried out with a similar saving, and if one horse is saved upon every 100 acres, and cost of stock, keeping and physic of such horse, reckoned at £30 per annum,

the saving will be at the rate of 6s. per acre upon such 100 acres. If the rent of the farm is 30s. per acre, and the hedges cover one tenth of the land, the absence of such hedges will be at the rate of 3s. per acre, or in other words, the land uncovered with hedges would be available to the growth of crops in that proportion, and the gain will be more, for it is not merely the land covered that is gained, it is all the land near that is affected by the influence of fences or hedges and trees, either by the direct action of the roots, weeds, insects, and atmospheric influence, harbour for game, and prejudicial effects in a wet harvest, and cannot be reckoned at less than 6s. per acre, compared to common unimproved farming, and even 10s. per acre on wet and clay lands. It is proposed that no great head of game shall be kept, except partridges, which a farmer is to do all in his power to preserve. With this understanding, a loss of 10s. per acre, may be avoided where the game is now rampant, but as this is not always the case, let us take 5s. per acre for this saving; even the bare possibility of having a head of game is worth that sum, as frequently such possibility deters farmers from making improvements at all.

The saving of manual labour will be one hour per man per day, or ten per cent. or on 30s. per acre, will be 3s. per acre. The saving by the new mode of securing the crop in harvest, will be at five per cent. on 120 acres, at £7 per acre, nearly 3s. 6d. per acre on the whole farm. These altogether amount to 23s. 6d. per acre at the lowest scale, and 32s. 6d. per acre at the highest, and the relief by an equal assessment to the poor and county rates, will probably exceed 2s. 6d. per acre more. These are merely the savings that will arise out of the new arrangement, without taking anything for the increase of crops and production that will inevitably ensue according to the skill and assiduity of the occupier, to an extent not contemplated by three fourths of the farmers of the present day, and the only means by which the author can convey a remote idea, will be by comparing the produce of every acre, as being equal to the very best crop that has been known in the neighbourhood.

It is of course taken for granted, that the tenant farmer will

have read the whole of this Essay, and has carried out the whole system of cattle rearing and feeding that is contemplated by the new farm buildings, including soiling and stall feeding all summer, so as at least to double the number of cattle ever turned off fat, from the same quantity of ground. This production, in which the foreigner can never successfully compete, should be the sheet anchor in the new system.

Should a lease appear more desirable by both parties in carrying out the new arrangements, it ought to be for a sufficient length of time to extinguish the amount of the first outlay—say twenty years, and the only restrictive covenants the Author sees necessary (after the usual reservations), is to limit positively the cropping—one green or pulse crop, to one white straw or corn crop, and so on alternately; and, except in particular localities, the whole of the hay, straw, and green crops to be consumed on the premises.

Enough has now been shewn that every farm is expected henceforth to be cultivated like a garden, and produce accordingly. Can it therefore for one moment be supposed that a garden cannot compete with a wilderness, for the wilderness cannot sow and grow corn, and bring it to the English market under forty shillings per quarter; besides which, our millers can only use a limited quantity. They must have wheats of home growth to mix to produce wholesome flour, and whenever the price approaches the minimum, more home wheats will be used in proportion. Supposing the farmer on the new system is able to produce only one-third more corn than is now grown on the same land, which every one will allow to be perfectly practicable, he will undoubtedly be in a condition to produce double the quantity of meat, or in other words, the production of one-half his land will be one-third greater, and for the other half it will be double, and this last without fear of foreign competition. If things be so, there is at once an ample margin for hope and discreet exertion, which will be far better than emigration, which, after all, is no light affair even as far as hard work is concerned. Roughing it out in the bush will be found a poor method of taking revenge upon Free Trade, to say nothing

for hope and discreet exertion, which will be far better than emigration, which, after all, is no light affair even as far as hard work is concerned. Roughing it out in the bush will be found a poor method of taking revenge upon Free Trade, to say nothing of the loss of life, expense, and the usual casualties of such a proceeding.

Political economists may attempt to prove the new system will lead to over-production, but they must remember that great changes cannot be effected without the effluxion of time, during which population will increase ; and when foreigners find we are in earnest as to keeping them out of the market, they will not make provision to supply us beyond what may appear probable will be wanted. It is not reasonable to suppose that this or that plan can be carried into effect instantaneously. The Author has generally observed, that twenty years is about the period in which great works are in hand, from the first crude idea being published, to the final completion ; and should this new system be twenty years before it is universally productive, no fear need be entertained on the score of over-production. The most difficult matter to guard against is fluctuation in prices that will occur in the early stage of the transition. This may be evaded by capitalists withholding their corn when very low, but that is merely speculative, and foreign not only to farming in general, but also subversive of the regular consumption of straw, &c. and consequent production of manure.

If any readers are dissatisfied with the Author's suggestions, they will do well to think over the subject, and study the same in whatever books are at hand ; they will probably find the authorities for the foregoing quotations—thus discovering as much as the half-ruined and sick farmer did, who was advised by his physician to rise at four o'clock every morning, and drink at a certain spring, situated at the extremity of his farm. He did so, and found his neighbour's cattle eating up the grass in the spring meadow, while his own were starving for want of it. Thus by one effort he was able to recover his health, and see the cause of the want of his worldly success.

It was the writer's intention to have given references at the

foot of each page, but the desire to have this Essay published previous to the Norwich Meeting of the Royal Agricultural Society prevented. The whole is therefore from memory and much from dear-bought experience, for it is a fact that the Author has had experience as a member of every class of persons he has taken the liberty to address, and may be likened to the "Mother who looked in the oven for her daughter," simply because she had been there herself under similar circumstances.

The Author cannot close this Essay without addressing a few words to the rising generation who are desirous of becoming tenant farmers, who are as much interested as any party in the future prospects of farming; and they will do well to weigh the chances of success that are before them. First, it is necessary they should distinctly understand, that in all common cases it will be very difficult for the sons of the present generation to maintain a similar position in society to that of their fathers, owing to the sub-division of property amongst the members of a family, frequently leaving each share too small to take an occupation equal to, or in any way to be compared to their fathers.

Probably the new system will require a greater number of Clerks and Bailiffs, which will afford the best opportunity of acquiring experience, as it will be at free cost—no small advantage to a young man—for the writer is decidedly of opinion that no man under 30 years of age ought to take a large farm on his own account, no matter what his capital may be, unless it be under the guidance of a father, or an equally responsible and confidential adviser.

The Author now begs to conclude, trusting he will have as much indulgence with his readers, as the value of his suggestions will permit; and however wild they may appear, he is prepared to carry out every principle, and it should be borne in mind, that every great change has been viewed with distrust when first shewn to the world. Witness the introduction of gas, which was entirely disbelieved, and when the late Mr. Stephenson, before a Committee of the House of Commons, stated the possibility of travelling thirty miles per hour per rail, all the Members fell

back in their chairs with roars of laughter; and the Author remembers in his own practice, the scepticism that shewed itself when he was about to introduce a steam engine in draining some marshes. Nevertheless as the engine did drain the marshes, the sceptic parties were as loud in their praise as they were formerly in their doubts. Only looking for a clear stage and no favour, to the well informed part of the agricultural community he begs to apologize for the many trite and frequent repetitions, as he has endeavoured to frame the subject to the capacity of the non-reading farmer, (to use the most favourable and least offensive definition,) and hopes the friendly advice here offered, will be taken in the way it is meant—to beware of, “Had I wist,”\* when it is too late.

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The Author is delighted that a Second Edition is called for, a proof that his efforts may become useful. The remarks and assurances he has received from all classes of agriculturists are also those of satisfaction, and in no case has he been accused of class prejudice; all are glad the truth has been spoken. He is also glad his production has excited the criticism of the public press, although he has seen no arguments used that he did not expect from such quarters; and although it would be extremely easy to expose ignorance, it by no means follows that time can be devoted to such a graceless task, nevertheless, any gentleman of known agricultural practice shall be replied to upon inquiring into any parts that may appear obscure. He still persists in saying it was the soft texture of the debate at the Farmers' Club that aroused his faculties to furbish up his armour.

It is quite true he has been a landowner, gentleman, and tenant farmer; also a cow-boy, cow-keeper, and bullock-tender, in which last capacity he invented a turnip-cutter, for which he received a medal from the Society of Arts in 1827, and also

\* Had I known it before.



satisfied himself that by constant attention to the feeding of Galloway Scots they could be as easily fatted in nine months as by the old "happy-go-lucky" way in twelve months.

Let the public decide between the Author and the Critic.

*Norwich, 8th August, 1849.*

